



US009694455B2

(12) **United States Patent**
Brown et al.

(10) **Patent No.:** **US 9,694,455 B2**
(45) **Date of Patent:** ***Jul. 4, 2017**

(54) **PRECISION TRIPOD MOTION SYSTEM
WITH SIX DEGREES OF FREEDOM**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 313 days.

This patent is subject to a terminal dis-
claimer.

(21) Appl. No.: **14/096,852**

(22) Filed: **Dec. 4, 2013**

(65) **Prior Publication Data**

US 2014/0151947 A1 Jun. 5, 2014

Related U.S. Application Data

(60) Provisional application No. 61/733,822, filed on Dec.
5, 2012, provisional application No. 61/733,834, filed
on Dec. 5, 2012.

(51) **Int. Cl.**
B23Q 3/04 (2006.01)
B25J 9/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **B23Q 3/04** (2013.01); **B25J 9/0045**
(2013.01); **B25J 17/0266** (2013.01); **A61B**
17/62 (2013.01);
(Continued)

(58) **Field of Classification Search**

CPC B25J 17/00; B25J 17/0291; B25J 9/0045;
B25J 17/0266; B23Q 3/04; B23Q 1/5462;
Y10S 901/19; Y10T 74/20329

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(57) **ABSTRACT**

A precision tripod motion system is provided. The tripod
motion system in one example includes a bottom plate
including three spaced-apart bottom single-degree-of-free-
dom (SDOF) hinge portions, a top plate including three
spaced-apart top three-degrees-of-freedom (TDOF) joint
portions, with the top plate configured to receive a work-
piece, three linear actuators pivotally coupled to the three
bottom SDOF hinge portions of the bottom plate and
coupled to the three top TDOF joint portions of the top plate,
with each linear actuator of the three linear actuators con-
figured to change length over a linear actuation span, and a
rotator component and/or a positioning table affixed to the
top plate and the bottom plate. The tripod motion system is

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